

macdonald

FARM

journal



- ★ **Geology Of Quebec**
- ★ **Early Returns From Red Pine**

November, 1965

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THE MACDONALD LASSIE

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OUR COVER : The passageway between the Main Building and Stewart Hall on the Macdonald College campus and fondly known to generations of students as the "Arctic Circle", has its own charms in the November sun. Ken Bowe photo.

THE EDITOR'S COLUMN

THE FOCUS on the Farm Problem in this election only confirmed in the public mind an opinion already held—that agriculture in Canada is a fast deteriorating industry. Conditioned by months of adverse publicity — the farmer's strike at Lake St. Jean, the depressing economic report of rural poverty in the Gaspé, the Farmers' Union march on Ottawa, emergency aid to drought-stricken farmers, for example — it is little wonder that so many people are concluding that farming is indeed "on the skids". In Quebec, a Royal Commission of enquiry has been appointed.

Certainly, no one can doubt that the industry is going through a period of disturbing change. Thousands of farms which once provided good family living have been abandoned. Others have doubled and tripled their output with no greater net income. Few can afford the machinery required, or pay the wages for a hired man. Many good farmers are openly worried. Farm, community, and government leaders are anxiously searching for answers to the problem.

In our opinion, we are overlooking in the search two very important concepts. To bring them into focus is to change dramatically our viewpoint of the situation. The present problems become mere shadows obscuring the vision of an exciting dynamic industry in a process of healthy change.

In the first place, the Agricultural Revolution, as we have come to call it, contrary to popular notion cannot possibly continue indefinitely. It had a beginning and it must have an end. It began the day that the first tractor replaced the first horse, the day that muscle power was no longer the factor limiting a farmer's productivity. It will end when the equilibrium so sharply upset has once again been restored. It will end when the manpower thus released has found its new role in the larger field of the national economy. This revolution in technology has been sudden, dramatic, swift. In terms of history, it has taken but an instant.

True, change is always with us, but the graph of this present revolutionary period is so steep that, should it continue, not one farm will be operating by the century's end!

The tragedy, and indeed there is a tragic side to it, is that a generation of people have been caught by the swiftness of the change. Many, through no fault of their own, have been hurt. Many more will suffer failure, and the emotional and physical hardship of re-adjustment. This social problem must be treated as an emergency. It is our public and private duty to do all in our power to help.

Then there is the second forgotten factor. We overlook that every equation has two sides. It has been said that fifty farmers out of every hundred could quit, and the country would be better off. But it is rarely said that by the same calculation fifty out of every hundred must stay if the nation is to survive.

We like our three meals a day. We like our meat, milk, eggs, vegetables and bread. With each day, our population grows. They, too, like meat, milk, eggs, vegetables and bread. Science offers yet no substitute for the food-providing power of green plants in sunlight, or for the men who cultivate them.

These men, the Other Fifty, unrecognized are farming now. They also need assistance, a different assistance, to meet the challenge of change. No less than their forebears, they are true pioneers, with courage no less stalwart. They demand little, but are grateful for encouragement in their decision, for assistance to plot a course through the rough years ahead.

If we read the news again, we find that in fact no industry is increasing its efficiency as rapidly as agriculture, that even now nowhere in the world do fewer farmers feed the population, that no country produces food at lower cost to the consumer.

In the short run, there are indeed serious problems awaiting swift solution. But no course of action can succeed which fails to recognize that an equation exists, an equation which demands quick action. The problems are distinctive to each of the two sides; the solutions will be equally distinctive.

In the long run, how can we view the future of Canadian Agriculture with other than optimism?

Walker Riley

The Consumer and the Livestock Industry

Why should the whims of the consuming public force any industry into inefficient production? In an address to the Canadian Society of Animal Production, Dr. L. Lloyd, Chairman of the Department of Animal Science, considers the question.

IN ALL PARTS of the world where free enterprise prevails and where the human being is at liberty to make demands of the producer and processor, consumer preferences play an extremely important part in the nature of the product made available on the market. In practically every industry the demands of the consumer must be catered to if the industry is to survive.

In many instances the consumer is sufficiently knowledgeable and fastidious to force the producer and processor to provide a product of superior quality. This is a commendable aspect of our way of life. However, much less commendable is the pressure exerted by the consumer for the provision of a product that is not of superior quality and which, in many cases, is more expensive to produce.

In other words, why should any industry be forced into the production of a commodity that is based on an ill-founded fad of the consuming pub-

lic? Obviously no industry will dare to disregard any consumer preference, regardless of how ridiculous it may be. Who, then, should assume the responsibility of attempting to direct the public towards a more intelligent approach to its likes and dislikes? This question is not easily resolved.

Let us take a look at one consumer demand that is important within the poultry industry at the moment, but which makes very little sense. This is the demand for broilers and egg yolks with a certain degree of yellow coloration. Apparently, the consumer has decided that 1) a broiler with well-colored shanks and body fat is either tastier or has greater nutritive value than a "pale" broiler, and that 2) an egg yolk with a certain degree of coloration, not too much of course, has greater advantages over a pale yolk. This makes little more sense than the consumer preference for eggs with either coloured or white shells — a preference dependent to quite an extent upon the geographic location of the consumer?

However, the consumer must be considered first, and the research interest in pigmentation displayed during recent years indicates how a demand by the public, regardless of its true value, can even influence the direction of research activities in university and governmental laboratories.

On a nutritional basis, there can be no justification for all this attention to pigmentation. The minor augmentation of vitamin A potential through increased deposition of carotene does not justify the cost of the pigments. In this connection, it has been reported

that a high vitamin A level in the hen's ration will actually depress yolk colour. The demand for pigmented broilers and egg yolks may also bring about unwarranted rejections of nutritionally valuable cereal grains by feed manufacturers in favor of well-pigmented yellow corn.

Why must we continue blindly to produce exactly what the consumer demands? Surely some well-directed efforts in public education would help to minimize the time and effort devoted to the perfection of an unnecessary product demanded by an uninformed but impressionable consumer. In so doing, the poultry researcher, for example, would be able to direct his attention to more worthwhile projects than imparting a certain degree of yellow color into the shanks of broilers or the yolks of eggs.

Pigmentation is used here merely as an example and this should not be construed as a criticism specific to the poultry researcher. We can apply the same reasoning to the dairy cattle geneticist who continues to strive for high butterfat content in milk and to the beef cattle nutritionist who continues to create rations and recommend feeding practices which will over-finish his animal.

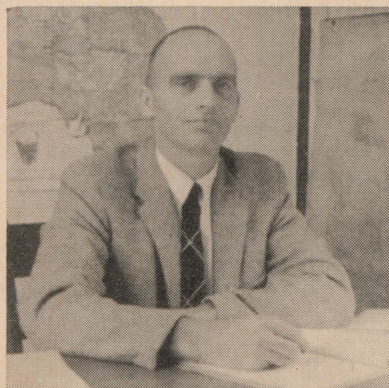
Our association between taste and product is not necessarily the association that our grandchildren will have. If our destiny is to feed a doubled world population our responsibility is to produce animal products as efficiently as possible. We must not be overly influenced by 1965 consumer preferences.



Dr. L. E. Lloyd

Geology of Quebec

by A. F. MacKenzie*



* Dr. A. F. MacKenzie is Assistant Professor of Soil Science at Macdonald College.

For non-geologists, Dr. MacKenzie translates these terms.

Igneous rocks - formed from molten minerals

Metamorphic rocks - changed by heat and pressure

Sedimentary rocks - reformed from fragments of rock

Igneous intrusion - non-volcanic out-thrust of molten rock

Peneplain - a plain resulting from erosion

Fault - a crack in the bed rock

Alluvial sands - river sands

Pre-Cambrian - ancient, even geologically

Pleistocene - geologically yesterday

FOR THE PURPOSE of geological description, Quebec may be considered in three regions: the Laurentian Plateau, the St. Lawrence Lowlands, and the Appalachian Highlands.

The Laurentian Plateau is an immense plateau with uneven, rolling surface. The southern edge of the plateau more or less follows a line joining Quebec and Hull and forms the north shore of the St. Lawrence estuary. This region is composed almost entirely of Precambrian rocks and the geology is complex and in many locations obscure.

The St. Lawrence Lowlands include the plains bordering the St. Lawrence River south of the City of Quebec and in the southwestern part of the province. The underlying rocks are mainly sedimentary and there are several igneous intrusions. These intrusions form the Monteregian Hills.

The Appalachian Highlands compose the south eastern part of the province, bordering on Vermont, New Hampshire, Maine and New Brunswick, and also occupy the entire Gaspé Peninsula. This area is composed of deformed sedimentary rocks and igneous rocks occur as intrusives and volcanic flows. The Appalachian Highlands are part of a mountain system which extends from the State of Georgia to Gaspé and reappears in Newfoundland. In the southern part, the hilly region is generally known as the Eastern Townships. The boundary between the Appalachian Highlands and the St. Lawrence Lowlands occurs along the Champlain fault which be-

gins at the top of Lake Champlain and moves almost directly to Quebec City. This fault consists of a band of disturbed rocks several miles wide. However, it is generally overlain by later lake sediments and not directly visible. The relief of the Appalachian Highlands is largely due to differential erosion prior to glaciation. The general surface indicates an early peneplain, of which these hills are remnants. Later elevation of the land caused accelerated erosion that removed 1000 to 2000 ft. of the softer rocks of the basins. The Mountain ranges are composed of metamorphic rocks of both sedimentary and igneous origin (Quartzite, sandstone, slate and limestone).

Recent Geology

The surface of Quebec has been modified most recently by the advance and retreat of glaciers during the Pleistocene epoch. The last of these enormous ice sheets originated on the Laurentian Plateau and moved southward, at its greatest extent covering all of what is Quebec today, to a depth of 6,000 to 10,000 ft. As the glacier front began to recede, melt-waters were dammed along its front because it blocked off the St. Lawrence valley. These melt-waters had to escape southward through the ancestral Illinois, Ohio, Mississippi Rivers and other spillways. As the glacier front retreated further down the St. Lawrence Valley and away from the river mouth, marine waters invaded the area in which Montreal and Ottawa are now situated. This marine sea, called the Champlain Sea,

deposited level clay sediments over south-western Quebec. It also formed gravel beaches such as found near Franklin Centre and on the flanks of the Monteregian Hills. As the ice front receded further, the land which had been depressed by the immense weight of the ice began to lift. The sea water retreated to its present position and fresh water again flowed through the St. Lawrence and Ottawa River valleys. These valleys gradually shrank to their present dimensions. Thus the St. Lawrence Lowlands contain level, heavy textured marine sediments and complex, stream-alluvial sands and silts. These areas also form a complex with areas of glacial debris. This debris is in the form of a mixture of rock, sand, silt and clay deposited by the ice and exposed because of its higher topographic position. The Appalachian Highlands were not submerged under this sea and thus contain evidences of the original glaciation. These evidences include partially ground-up rock debris, gravel channels from old melt-water streams, and undulating to rolling topography.

Soils in the Lowland areas are predominantly level, and stone free, but require surface or tile drainage. Emphasis is on spring grain and forage production. Crops are generally responsive to fertilizers and often responsive to lime.

Soils in the Eastern Townships are more variable in composition, depth and topography. However, they are generally lighter in texture (more sand)

(continued on page 10)

The photos on this page illustrate the three physiographic regions of Quebec.

The granite rocks of the Laurentian Highlands are covered by a thin mantle of acid soil supporting a coniferous forest growth.



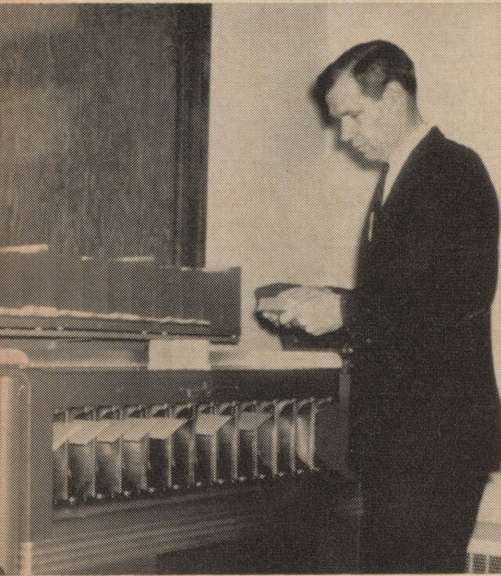
The clay plains, at one time sea bottom, form the fertile farm lands bordering the St. Lawrence and Ottawa Rivers. The Laurentians are in the background.

The rolling hills of the Eastern Townships are part of the Appalachian Highlands, eroded to their gentle contours even before the last glaciers pushed over them some 25,000 years ago. Quebec Department Agriculture photos.



ELECTRONICS AT MACDONALD . . .

. . . A Computer



Data for processing by a computer is first punched on cards and sorted. Here Prof. John Moxley operates the Card Sorter.

This month, Macdonald College officially enters the Computer Age with a computer on Campus. In recent years, staff and graduate students have made use of the computer on the McGill Campus. The vast potential for computers in Agriculture has made it obvious that agricultural graduates will need to have a greater understanding and appreciation of computers and their use in the future.

An I.B.M. 1620 Model 2 computer system will be installed and in operation by mid-October. The 1620 was originally designed for scientific applications. Recently, it has been improved and augmented to make it a versatile unit which is ideal for teaching, research and for routine data processing. It uses the same programming language and a monitor system similar to the larger computers. The monitor system permits the computer to process a variety of analysis in rapid succession without human intervention.

Some appreciation of the potential of this computer system can be realized from its vital statistics. This unit reads punched cards at the rate of 250 cards

per minute. An inline printer will print out data and results at the rate of 150 to 430 lines per minute. Internally, it will add or subtract 7,142 sets of five digit numbers per second. It will multiply 826 or divide 309 sets of figures per second. It can make up to 50,000 logical decisions per second.

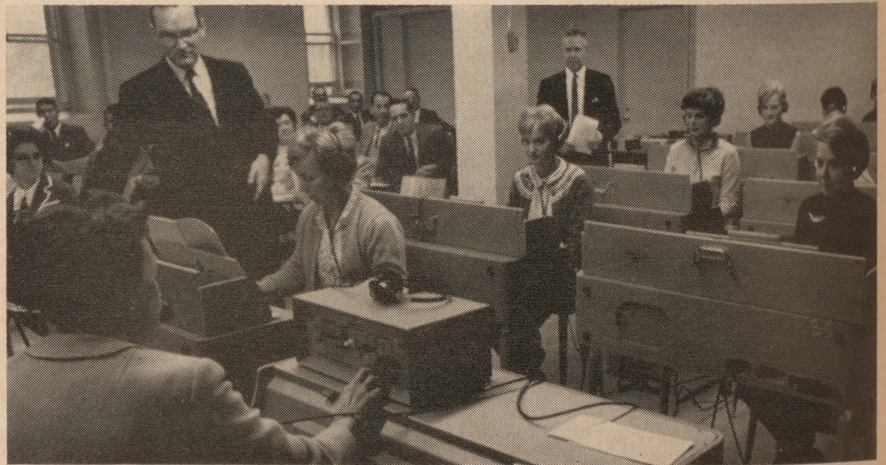
Some of the flexibility of this computer is provided by 2 disk storage drive units with interchangeable disk packs. Two million digits can be stored on one disk pack. These disk packs can be removed and replaced in one minute. Data can be read into or out of the disk packs at the rate of 77,000 digits per second.

This computer will have a wide range of uses on the Campus but it will have a special role in the development of programs to serve the farmer. Programs which provide routine analysis of farm operations enable farmers to make sound management decisions and enable research workers to locate and redirect research into more useful channels. Thus, this computer will serve to strengthen the relationship between the College and the farm community.

. . . And Music

IMAGINE, if you can, twelve pupils playing twelve pianos all at one time in one small room. And not a sound. Seems rather like a chapter from Alice-in-Wonderland, or like watching television through your neighbour's window, doesn't it? But that is really happening here at the College. The new music room, during a class, is the quietest place on the campus. Electronics have invaded the age-old art of music teaching.

The communications centre — one of the first in Canada — consists of 12 electronic pianos and a master control panel. Students are able to practise on individual piano units with earphones so that only they themselves can hear their playing. The instructor, however, is able to tune in to any one of the group and give instructions to just one student through the microphone attached to the teacher's headset. For group ac-



At the control panel of the new electronic piano centre is Fay Templeton Frisch, internationally-known music educator. Looking on are Dr. F.E. Churchley and Professor Wayne Hall, Dean, Faculty of Education, rear.

tivities, students can take off the earphones and turn up the volume so that a normal piano sound is audible.

Attachments are also included which permit students to listen to tape recordings or disc recordings through their headsets, again, with no sound being emitted in the room to disturb others.

This new music laboratory equip-

ment has many advantages. The pianos are so built that it is impossible for them to go out of tune. They are space-savers, since they allow twelve students to practise in one room. They are staff-savers since one instructor can teach twelve players at once. Most important of all, they provide flexibility for introducing new music teaching techniques.

EARLY RETURNS FROM RED PINE PLANTATIONS

"In the constant effort to make money to pay for labour, transportation, and materials, and to keep the account out of the red, one must seize on every means of earning money early." (Hiley, W. E., 1956 - Economics of Plantations)

by J. D. MacArthur*

AN IMPORTANT factor holding back private reforestation is the long delay between establishment of the crop and the first net returns. Costs and compound interest charges accumulate throughout the life of a plantation and are usually only cancelled out when the final harvest cut is made. However, during the life of the plantation, anything that can be done to reduce costs by obtaining a net return from sales will greatly increase the profits from the operation. Sometimes, it is possible, through good management and promotion, to sell at a profit what would otherwise be waste material produced by pruning and thinning operations.

This has happened at the Morgan Arboretum of Macdonald College in the last few years and the idea has paid off very well. At the Arboretum we have a number of young pine plantations in which we are thinning and pruning with a view to producing high quality saw-logs. Each year as a service to its members, the Arboretum holds a sale of Christmas trees. Some years ago we began offering bundles of pine boughs of branches for use as Christmas decorations. These were placed on sale with the Christmas trees and it was soon clear that a strong demand

existed. Sales increased each year and we are now reaching the point where this profitable item will soon be in short supply because most of our plantations have been pruned.

The business of selling pine boughs fits in neatly with the Christmas tree sale. The bundles are merely pointed out to customers buying trees and they practically sell themselves. Furthermore, the person in charge of the tree sale spends his time between sales making up bundles from a supply of boughs kept handy.

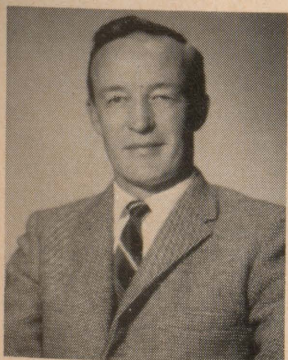
Pine branches and needles are not perishable and the pruning in the plantations can be done several weeks in advance of the sale. Boughs can be left on the ground in the plantation and picked up when convenient for

transportation to the sales lot. We have found by experience that not only red pine but other pines — white, scots, and even jack pine, — are well received by purchasers. Incidentally, cull Christmas trees and obviously poor trees in the plantations can all be converted into boughs and thus not be lost completely.

For our 1964 bough sale, 566 red pines were pruned for 567 bundles of boughs. The bundles were retailed at \$1.00 each and total costs equalled 41 cents, leaving a net return of 59 cents. The trees in the plantation were 14 years of age and were pruned to half their height. Higher pruning would reduce growth. Thus a 14-year-old plantation with 800 trees per acre would yield a net return of \$472 per acre under these conditions. Not only does the sale of boughs yield an important early return, but such an operation leaves us with a completely pruned plantation and removal of much of the foliage and branches for sale reduces the danger of fire or insect attack in the plantation. Equipment is simple. Only a short-handled pruning saw and a pair of hand pruning shears are required.

We realize that the Morgan Arboretum, situated on the west end of

(continued on page 10)



* J. D. MacArthur, B.Sc.F (U.N. B.) is Forester-in-charge and Curator of the Morgan Arboretum, Macdonald College.



Prunings from red pine yield one bundle of boughs. Arboretum's foreman Bob Watson demonstrates plastic net wrap. Left, these 14-year-old red pines were pruned to half their height for Christmas boughs in the Morgan Arboretum.

GEOLOGY OF QUEBEC

(continued)

and more acid than soils of the Lowlands. Low soil fertility and erosion hazards are major problems, along with steep slopes, stoniness and shallowness of the soils. There are few areas suitable for intensive cultivation.

Additional Notes of Interest

1. The name, Eastern Townships, originated partly because the area is east of Montreal and Trois Rivières (the points of entry in early days) and partly because the British regime used the township as the unit of survey not the seignior as used in earlier surveys by the French.

2. The Appalachian Highlands in Quebec consist of three ranges of hills that traverse the district in a north easterly direction. These are, from west to east, the Sutton, Stoke (or Ascot) and Lake Megantic ranges. The Sutton range is the most pronounced, and is a continuation of the Green Mountains of Vermont. Elevations of the more prominent mountains are: Round Top 3200 ft; Pinnacle 2150 ft; and Orford 2860 ft.

The Stoke range enters Quebec on the west side of Lake Memphremagog and continues to St. Francois Lake. The highest point is Mt. Chapman near Dudswell, 1800 ft.

The Lake Megantic range forms the height of land between the St. Lawrence and the Atlantic Ocean. This divide also marks the international Boundary. The hills rise higher than in the other ranges: Big Megantic 3620 ft; Gosford 3875 ft.

The Monteregian Hills are a striking series of hills that rise from comparatively flat country south of the St. Lawrence River. They lie for the most part along a somewhat curved easterly trending line, spaced at intervals of eight to ten miles, and the hills extend for fifty miles east to Brome and Shefford Mountains. Mount Royal is the most westerly hill.

The Monteregian Hills are basic igneous intrusions believed to be of late Devonian age (405 to 255 million years ago). The igneous rocks of the hills are of similar composition, indicating they were derived from a continuous reservoir of uniform magma. This magma ascended from the reservoir at the various points through vertical pipes which may or may not have extended to the surface as active volcanoes. Brome and Shefford appear to be parts of a single intrusion which is still lightly covered by sedimentary strata between the two hills. The other hills appear to be plugs, exposed by differential erosion of the surrounding materials. A dyke on the north side of Big Megantic mountain which forms a sharp ridge is considered by some to be the easternmost representation of the Hills. Big Megantic mountain itself is igneous material of an earlier origin.

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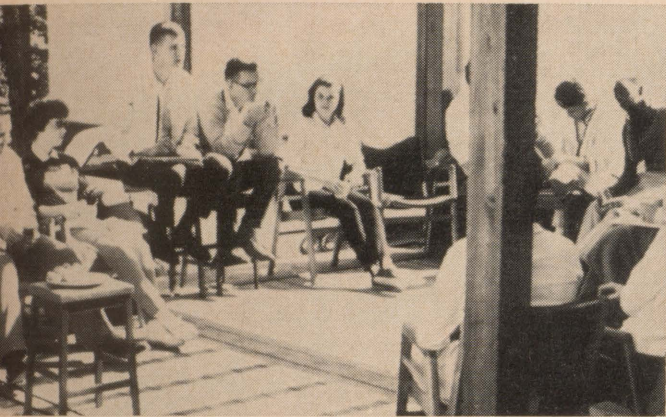
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Montreal Island, has a special advantage for this sort of operation. But this market is not unique. The net return is large enough that people much farther away might still find it possible to sell, or supply for sale, red pine boughs at a profit. Certainly, if Christmas trees are already being sold, this added attraction would fit in very well.

While we hope that this example of profitable sale of what has usually been considered waste material may show the way to other plantation managers, we also hope that it will serve as an example of something else. It should indicate how plantation managers must be ready to jump the gun wherever possible through the development of markets for whatever material they have available. Substantial profits await the manager who, through imagination, hard work, and perhaps a little luck, MANAGES to turn waste products into cash.

The Image Of Macdonald

by Gail Robison



George Shaw, 4th year agriculture, leads the student group in discussion. The verandah of the study centre at Mt. St. Hilaire provides a perfect setting in the September sun.

As reported in the last issue, a three-day student-organized, student-led Leadership Workshop was held at the Mt. St. Hilaire Study Centre prior to the fall term. The following extract from a report by Gail Robison, fourth-year student in the School of Household Science, and vice-president of the Students' Council, gives a clear idea of the responsibility accepted by today's students, and bears close reading.

THE IMAGE of Macdonald was a discussion topic which presented a challenge to each individual attending the Workshop and it brought out many thought-provoking comments. The problems seemed to be what does Macdonald College stand for, how do we project our college and what it is to others, what impressions do others have of our college, and who do we want to reach with our image.

In the open discussion, it was generally agreed that our audience is the general public but in particular, we are concerned with the image of Macdonald College in the view of other college and university students and high school students, the college students of the future.

To our concern, the image in the eyes of some, is that Macdonald College is a school for "farmers and housewives". Full credit does not appear to be given for the effort and study required for the courses — most of which involve much more science and technology than people realize. Some agreed that the need for Home Economists and Agricultural leaders is becoming so increasingly pressing that this false image may soon die because of our rising standard of living and our higher standards of education. Until this time, the problem exists that this false image must be changed.

To change the image, it was agreed that stress must be placed on what Macdonald stands for — Agriculture and Education. Education seems to be readily accepted so the concern seems to lie in Agriculture. The discussion resulted in the fact that the food image rather than the farm image must be created for this is the one field of study that Macdonald has that McGill, for example, does not have. Food is our main concern. The Faculty of Agriculture studies the source — crops, animals, problems of disease, etc.; the School of Household Science continues this study dealing mainly with the finished products including nutrition, hygiene, preparation and preservation, food service. By promoting Agriculture as an industry involving science and technology in many phases, a new image will be created.

It was felt that the best way to portray the college image other than at College Activities, College Royal, and McGill Open House, is through each student's pride in his college and what it stands for. Macdonald College students come from all over the world and each one may have an amazing influence over friends and acquaintances by his attitude toward visitors on campus and in his community and working environment. It is up to the students to make this a favourable influence and give Macdonald College the name and image it deserves.



GAIL ROBISON

THE FAMILY FARM

PUBLISHED IN THE INTERESTS OF THE FARMERS OF THE PROVINCE

BY THE
QUEBEC DEPARTMENT OF AGRICULTURE AND COLONIZATION

Compiled by T. Pickup of the Information and Research Service,
Quebec Department of Agriculture and Colonization.

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farm lands

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Government assistance to fifty Que-
bec counties.
Winners in the 1965 agricultural
merit contest.
Lime for controlled atmosphere
storage
Quebec exports dairy cattle

PHOTOGRAPHS BY
OMER BEAUDOIN



Attractive buildings on the farm of Mr. Joseph Savard at
Peribonka, Roberval.

Notice To Competitors: Farm Beautification Contest *from Gérard Hudon*

I am very glad that you have entered for the Farm Beautification Contest which is being held in preparation for the International Exhibition of 1967.

The preliminary judging was to have taken place early this year, but the Minister of Agriculture and Colonization, Mr Alcide Courcy, has decided to postpone the final date for entries until December 31st 1965 in order to give all farmers an opportunity to take part in the Contest.

The preliminary judging will therefore taken place in the spring of 1966.

It goes without saying that those who have already entered may start to make improvements immediately. It will be to their advantage to do so because the judges will take into account all work carried out since the contest began.

The Department of Lands and Forests will give approximately 10 trees to each entrant. In the spring of 1965, about 7,000 trees were distributed to competitors in five counties.

During January 1966, we shall send an order form for trees to all entrants. Trees thus requested will be distributed in April 1966. There will be another distribution in April 1967 if necessary. Please note that, although no charge is made for the trees, the cost of delivering them must be paid by the contestant.

During the coming winter (1965-1966) you will also receive information and publications concerning beautification.

I wish you every success in your efforts to make your home more attractive and agreeable.

*The Director of the
Farm Beautification Contest.*

This page supplied in the interests of the Family Farm by the Quebec Department of Agriculture and Colonization.

Farrowing cages on the farm of Mr. Johnny Bergeron at St-Prime, Roberval.



A new method of scoring carcasses has been introduced into the record of performance program for swine.

The new approach is expected to provide a more accurate appraisal of carcass value and enhance the usefulness of the program, say officers of CDA's Livestock Division. It is one of several changes approved by the program's Advisory Board which will apply to pigs born this year and entered for testing.

Scoring under the new system is based on a calculation of the yield of saleable trimmed cuts in a carcass rather than on the total of the points awarded for various measurements.

Yield of trimmed cuts will be calculated from a number of carcass measurements: length, total backfat thickness,

Changes Set In ROP Swine Program

loin area, per cent of ham of carcass, per cent of lean in ham face, and warm carcass weight.

Four pigs from each litter are still required for testing. But because the new system provides correction factors for sex differences in carcass measurements, it is no longer necessary that there be two males and two females.

Other changes in the program:

The regulation setting a minimum size of litter has been dropped. Previously pigs entered for testing had

to come from a litter of at least eight by a sow and six by a gilt.

Occurrence of a ridgling, hermaphrodite or ruptured pig will no longer mean disqualification from testing of the others in the litter. However, the four pigs delivered to the test station must be sound and free of the abnormalities.

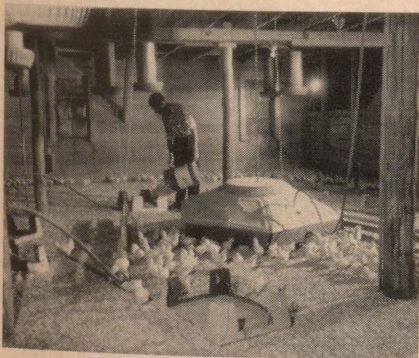
In another change, the age limit for completion of testing has been reduced to 200 days from 220.

(From "This Month with CDA", No. 2)

EFFECT OF FEED RESTRICTION UPON THE PERFORMANCE OF MEAT-TYPE PULLETS

N. Nikolaiczuk, Macdonald College of McGill University, Québec.

In the second of two experiments



Mr. Philippe Taillon of St-Prime, Roberval, tending his meat-type chicks. The cockerels will be raised for roosters and the pullets for broilers.

designed to study the effect of feed restriction procedures upon meat-type pullets, the following treatments upon replicate groups of 50 birds were imposed: I. Full feeding with complete high-energy growing and laying rations in mash form; II. The above rations withheld for 1.5 days each week (Saturday noon through Sunday); III. The above rations diluted with 20% oat hulls by weight and withheld for one day weekly. These treatments were effective during both the growing and early laying periods with water, oyster shell and insoluble grit available at all times. The following data were taken: body weight fortnightly; feed consumption; mortality; sexual maturity and initial egg production performance.

During growth from 10 to 20 weeks, feed restriction through withholding and dilution caused lowered per bird feed intake, 15.8 and 17.0 pounds for treatments II and III as compared with

18.2 pounds for the full-fed. This resulted, in turn, in smaller mean body weight gains viz, 2.34 and 2.12 pounds in comparison with 2.42 pounds for birds allowed unrestricted feed intake during the growing period. Feed restriction delayed sexual maturity time by 5 to 8 days in keeping with severity of restriction. During the laying house period of 14 weeks, the full-fed birds again attained the maximum mean weight gain, 2.18 pounds vs 2.16 and 1.98 for restricted treatments II and III, and laid 876 eggs vs 867 and 662 for the restricted groups. Full feeding also resulted in slightly larger mean egg size. The average feed intake per bird under the three treatments was 31.0 pounds, 28.5 and 34.7 pounds respectively for full-fed and restricted lots respectively.

Thus moderate restriction in withholding high-energy rations during

(continued on page 16)

Sources of farmers' incomes

Where do farm people get their income? This sounds like a simple question which should be answered: "from the sale of farm products."

A study by two federal economists, taking 1958 as a sample year, shows that this is not necessarily so.

The agricultural sector is made up of people earning income from many sources. At one end of this sector are people living on farms who depend very little on farming for a living and obtain most of their income from off-farm sources; at the other end are the farmers who earn their income by producing most of the country's agricultural output. In between are those who are farmers to a varying degree, including a relatively permanent class who combine rural living and land holding with off-farm earnings.

According to economists, Dr. J.M. Fitzpatrick of the Canada Department of Agriculture, and C.V. Parker of the Dominion Bureau of Statistics, "In a sector as heterogeneous as agriculture, provincial averages of income and expenditure, without an understanding of their distributions, can be misleading and cause the misinformed many pitfalls." The common practice of dividing the total farm income estimate by the number of census farms is unrealistic due to the wide range of income between small and larger farms and the large number of very small farms.

Net Income — Farm net income, or that income accruing to labor, management and capital from farming operations, showed similar wide fluctuations. The national average net farm income in 1958 was \$2,344. For regions it was as follows: Maritimes \$1,026, Quebec \$1,803, Ontario \$2,532, Prairies \$2,816 (Manitoba \$2,656, Saskatchewan \$2,541, Alberta \$3,278), British Columbia \$2,017.

The economists point out that there are many progressive farmers in the Maritimes but the average net farm income is greatly influenced by the predominance of farms with gross sales below \$1,200.

It is estimated that in 1958 about 14 per cent of farm holdings in the Maritimes, 22 per cent in Quebec, 37 per cent in Ontario, 45 per cent in the Prairies and 30 per cent in British Columbia had farm net incomes of \$2,500 or more.

The economists show that for an average farm family in Canada to meet living expenses of \$3,200 a year, without income from other sources than the farm, they would have to sell about

\$6,000 worth of farm products. (Living expenses include estimates of home-produced items). But actually 70.7 per cent of Canadian farm holdings had sales of \$5,000 or less in 1958 (22.5 per cent had sales below \$2,000). How did they bridge the gap and how are they bridging the gap today?

Farm Holdings, Sales and Income — Approximately one-third of all farm products in 1958 was sold by 8.9 per cent of farm holdings in Canada; one-third by 20.4 per cent of the holdings and one-third by 70.7 per cent of the holdings. Almost one-quarter of farm holdings in Canada shared only 2.6 per cent of farm sales.

Off-Farm Work — Farmers on large as well as small holdings earned off-farm income. The average for Canada was \$534 in 1958. With a shortage of experienced farm workers, income from working on other farms would be expected to be substantial. However, only \$17 per farm operator was received from this source compared with an average of \$408 from non-farm work.

Off-farm income in the Maritimes was very important, equalling more than half of the operators' net income from sales of farm products. Only in the Prairies did income to the operator and his unpaid family help from farming operations greatly exceed that from off-farm sources. For those on small holdings off-farm work provides the major part of their earnings.

Farm Family Income from Off-farm Sources — The main sources here in order, were wages and salaries from non-farm work, government pensions and allowances, and investment income. Pensions and allowances were more heavily concentrated on farms with low farms sales.

The significance of off-farm family income on the small farms is apparent from the fact that:

- (1) farm net income was only one per cent of total farm family income on farms with sales of \$250 a year or less;
- (2) sales had to reach \$2,000 generally before farm net exceeded family income from off-farm sources;
- (3) on farms with the highest sales, farm net made up nine-tenths of income from all sources.

Income versus Family Living Expenses — The average farm family spent approximately \$3,200 on family living expenditures in 1958 (including estimates for home-produced items). To

meet this, farm sales of \$6,000 or more were required.

On farms with sales of less than \$4,000, off-farm family income helped to bring income levels close to the expenditures of \$3,200. On farms with sales lower than \$2,000, off-farm income was their main source of income.

This, and previous page, supplied in the interests of the Family Farm by the Quebec Department of Agriculture and Colonization.

GROWING TOMATOES WITHOUT SOIL

Researchers are getting up to three times normal yield by growing greenhouse tomatoes in a sand-sawdust mixture rather than in soil at the CDA's experimental farm here on Vancouver Island.

The mixture is three parts pitrun sand and one part hemlock or Douglas fir sawdust. The plants are fed and watered simultaneously through perforated hoses laid along the rows.

Yields in the project have been running at about 15 pounds of fruit per plant. Average yields in the area are from five to seven pounds per plant.

By turning on a tap one man can water and feed the entire crop of tomatoes in a row of greenhouses each 100 feet long and 30 feet wide.

Commercial fertilizers are mixed in solution and metered out by hose proportioners. Water is brought in from the main and flows through the hose proportioners to carry the food to the tomatoes.

Why use sand and sawdust rather than soil? R.M. Adamson, who is in charge of the project, explains:

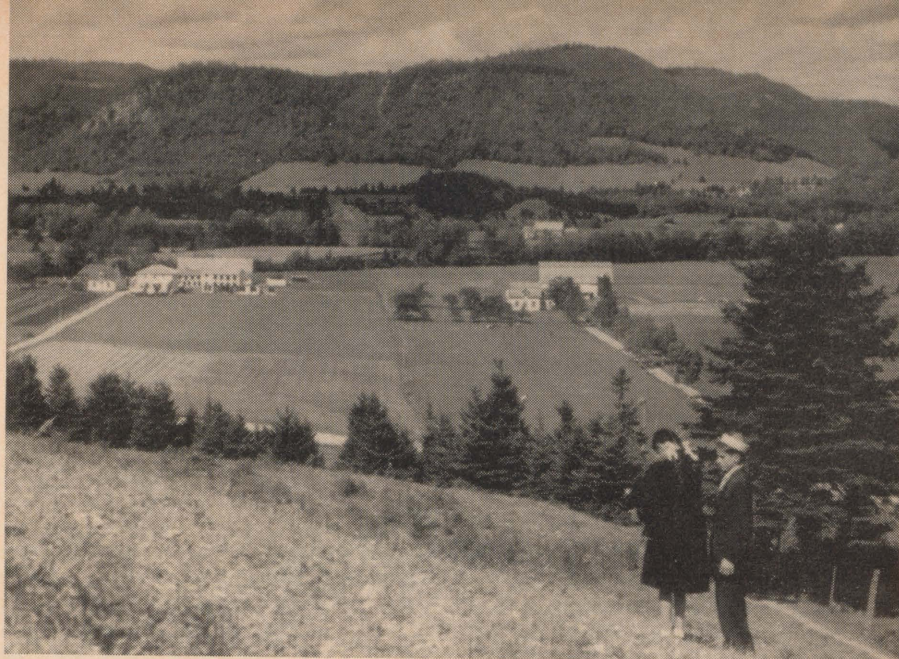
"The soils that are used for growing tomatoes in greenhouses in our area have become infested with various soil-borne diseases. And generally speaking the soils are too heavy for tomatoes. By switching to sand-sawdust we overcame the disease problem while at the same time giving the tomatoes a better medium in which to grow. Also this lends itself very well to use of labor saving equipment."

Mr. Adamson says that there is no reason why the same growing system could not be adapted to commercial tomato growing in greenhouses. One commercial grower in the Victoria area is already trying it.

Quality of the fruit appears to be just as good from the sand-sawdust mixture as from tomatoes grown in soil.

(From "This Month with CDA", No. 2)

This page supplied in the interests of the Family Farm by the Quebec Department of Agriculture and Colonization.



Two neighbouring farms owned by Mr. Ernest Dugas and his family at Nouvelle in Bonaventure county — a good example of agricultural consolidation.

Aid To Encourage Regrouping Of Farm Lands

I — PURPOSE

The Act to amend the Agriculture and Colonization Department Act ("Bill 27") authorizes the Minister of Agriculture and Colonization to acquire lands in the name of Her Majesty at a maximum price of \$6,000.00 in order to promote the establishment of farmers thereon and encourage the enlargement of farms.

II — BENEFICIARIES

A) Farmers or settlers who are already established and wish to enlarge their agricultural enterprise through the purchase of additional land.

B) Qualified persons who wish to establish themselves on farms but are not able to take advantage of the benefits of the Quebec Farm Credit Act.

III — REGULATIONS

A) Patented lots

1. The land which is to be acquired must be suitable for purposes of enlargement or establishment, as the case may be.

2. It must be situated within a radius of not more than three miles from the farm where the applicant has his residence.

3. The amount paid by the Government shall not exceed the market value of the property as determined by the Department, nor the sum of \$6,000.00.

4. The prospective acquirer must be duly qualified and demonstrate good prospects of success.

5. His application must be accompanied by a sum of money equal to 10% of the price of the property.

6. In the case of enlargement, at least half of the prospective acquirer's economically cultivatable land must already be under cultivation.

7. The total area of the land already possessed by the applicant plus that of the land he wishes to acquire must not exceed 300 acres except in the counties of Abitibi-East, Abitibi-West, Rouyn-Noranda, Temiscamingue, Rivière-du-Loup, Témiscouata, Rimouski, Matapédia, Matane, Gaspé-North, Gaspé-South, Bonaventure and the Magdalen Islands, where it may be as much as 550 acres as fixed by Order-in-Council number 1989 of October 21st 1964. Exception may also be made in the case of those owning land which they have obtained through inheritance, sale by court order, or sale for municipal taxes.

8. The maximum area which may be granted under a single location ticket is 200 acres.

B) Lots under location ticket.

This assistance policy also applies, under the same terms, to unpatented lots, the sale of which to the present incumbent may be revoked in return for just compensation.

IV — PROCEDURE

1. Application must be made on form 329-A and be signed by the seller

and by the prospective acquirer. It must include only lands and buildings.

2. The application must be sent, together with 10% of the price of the property, to the Department's representative, who will transmit it to the Development Division of the Land-Use Service after having established in a brief report the eligibility of the prospective acquirer and the validity of his application.

3. The vendor must be able to produce titles of ownership which will satisfy the Department's standards.

4. When the land that the applicant wishes to acquire and the land which he already owns have been duly inspected and assessed, the Department will inform the purchaser and the vendor of its decision.

5. The land that is to be acquired will be bought by the Department when all the pertinent documents are in order and will then be sold to the applicant under a location ticket at cost price payable in twenty consecutive annual instalments, of which the first nine shall be free of interest and the remaining eleven shall bear interest at 2½%.

For further information please apply to the Director of the Land-Use Service, Parliament Buildings, Quebec.

*The Deputy Minister of
Agriculture and Colonization,
ERNEST MERCIER,
Agronome.*

GOVERNMENT ASSISTANCE TO FIFTY QUEBEC COUNTIES

Mr Alcide Courcy, Minister of Agriculture and Colonization has announced that 50 counties in Quebec will benefit from the Federal-Provincial Drought Relief Programme - 1965.

This decision follows a survey, carried out in all counties of the Province, of damage suffered by grain and hay crops and pastures. In view of the great scarcity of hay and the very high prices being asked for it, allocations of subsidized feed for herbivorous livestock in the designated counties have been calculated in terms of quantities of grain or concentrates. The federal-provincial subsidy amounts to \$30 per ton for the purchase of feed grains or concentrates.

The survey distinguishes five groups of counties on the basis of severity of drought conditions in the different parts of the designated territory. Allocations of feed per county range from a quarter of a ton to one ton of grain per animal unit in the herds.

Six counties have an allocation of one ton: Chicoutimi, Lake St. John, Jonquière-Kénogami, Saguenay, Roberval, and Pontiac.

Seven counties are to have an allocation of $\frac{3}{4}$ of a ton: Gatineau, Papineau, Vaudreuil, Charlevoix, Quebec, Montmorency, and Portneuf.

Thirteen counties have been allocated half a ton: Argenteuil, Terrebonne, Deux-Montagnes, Soulanges, Matane, Magdalen Islands, Bonaventure, Gaspé-South, Gaspé-North, Matapédia, Rimouski, Témiscouata, and Rivière-du-Loup.

Nine counties have been assigned two-fifths of a ton: Beauharnois, Châteauguay, Napierville, Huntingdon, Labelle, Joliette, Maskinongé, Laviolette, and Champlain.

Fifteen counties have been allocated one quarter of a ton: l'Assomption, Montcalm, Berthier, St-Maurice, Lévis, Dorchester, Beauce, Bellechasse, Montmagny, L'Islet, Kamouraska, Abitibi-East, Abitibi-West, Rouyn-Noranda, and Témiscamingue.

For each of these counties, the allocation of feed for herbivorous livestock has been calculated, so as to make up the difference between the quantity of feed harvested in 1965 and two thirds of a normal crop (i.e. the average for the past five years).

It is still too early, in Mr Courcy's opinion, to make an accurate estimate of the cost of this federal-provincial aid to farmers in the 50 designated counties. The cost might come to between \$8 and \$13 million, depending on the number of farmers who wish to take advantage of the assistance offered them.

WINNERS IN THE 1965 AGRICULTURAL MERIT CONTEST

The winner in the professional farmers' class of the Gold Medal section of this year's Agricultural Merit Contest was Mr Fernand Perras of St-Isidore, Laprairie, with a score of 906 points out of a possible 1000. Mr Gérard Gervais, also of St-Isidore, came second with 901.5 points.

First place in the class for amateur farms in this section went to "La Ferme Richelieu" at St-Basile-le-Grand, Chambly, owned by Mr Hubert Soucie (900.5 points).

In the Silver Medal section, Messrs André and Maurice Surprenant of St-Valentin in St-Jean county, were first in the professional farmers' class with 889.5 points; Lebrun and Son, Inc., of Beloeil, Verchères, came second with 878 points; Jean Paul Beaudry of St-Marc, Verchères, third with 876 points, and Robert Ness of Howick, Châteauguay, fourth with 875.5.

The leading amateur farms in the Silver Medal section were those of Mr A.E. Lafitte of Ste-Clothilde, Châteauguay (897 points) and Mrs T.C. Stuart, Tutira Farm, Arundel, with 895.5 points.

The leading contestant in the Bronze Medal section was Mr Normand Fontaine of St-Marc, Verchères, with a score of 849.5.

The winner of the Gold Medal in the contest for pioneer farmers (L'Ordre du Mérite du Défricheur) was Mr Joseph Séguin of La Minerve, Labelle (929 points).

The awards were presented at a banquet attended by Mr Jean Lesage, Mr Alcide Courcy, and Cardinal Maurice Roy during the Quebec Provincial Exhibition.

This page supplied in the interests of the Family Farm by the Quebec Department of Agriculture and Colonization.

EFFECT OF FEED RESTRICTION

(continued)

growth of pullets and early egg production does not appreciably lower productivity but results in some feed economy and somewhat lower mortality/morbidity. Severe restriction of nutrients by combining ration dilution and withholding during the laying period reduces egg production.

(From "Recherches Agronomiques" No. 9)

LIME FOR CONTROLLED ATMOSPHERE STORAGE

Last year 113 tons of agricultural lime were used to absorb CO₂ (carbon dioxide) in controlled atmosphere (CA) storages in the Okanagan Valley.

Dr. S.W. Porritt, fruit storage specialist at CDA's Summerland, B.C., Research Station recalls that the principle of using lime to remove CO₂ from CA storages was introduced in Nova Scotia about six years ago, but had not been adapted for large storages until its use in the Okanagan in 1963. At that time lime "scrubbers" were used to remove CO₂ from six CA rooms, each of 24,000-bushel capacity.

In the 1964-1965 season agricultural lime was used successfully to absorb CO₂ in 17 CA rooms holding a total of 404,000 bushels of apples.

The scrubbers for these large CA rooms hold 200 50 lb. bags of lime. The lime is stacked on pallets and handled mechanically from the time it is received until the spent lime is disposed of.

Lime has proven to be a cheap and convenient means of controlling CO₂ concentration. Last year during a 6-month period the average utilization of lime was just over half a pound per bushel at a cost of about one cent, including handling charges.

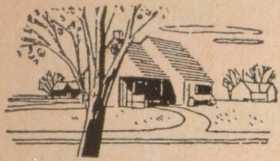
(From "This Month with CDA", No. 2)

QUEBEC EXPORTS DAIRY CATTLE

Dairy cattle from Quebec are becoming increasingly popular in other countries. They are now being sold in the United States and in South America. A number of shipments have already been made to Europe, particularly to Italy.

Wishing to open the huge French market to Canadian breeders, the Department of Agriculture and the Department of Trade and Commerce of Canada, in co-operation with the Holstein-Friesian Association, recently sent a herd of twenty Holsteins to France by air. The herd consists of two bulls, thirteen milking cows, and five two-year-old heifers in calf. One of the bulls, classified as Excellent, from the herd of Mr. Gaston D'Aoust of Saint-Henmas, cost \$5,000.

The animals are being exhibited at seven regional agricultural shows and five insemination centres across France. The herd is in the care of Dick Biggs of Dundas, Ontario; Joseph Potvin of Alfred, Ontario; Lucien Domingue of Shefford West, Quebec; and Pierre Lambert of Louiseville, Quebec.



THE BETTER IMPULSE . . .

News and Views of the Women's Institute of Quebec

W. I. MEMBER PRESIDENT OF HUNTINGTON FAIR

The Huntingdon Fair, one of many fine agricultural fairs held in Quebec, had Mrs. W. E. Bernhardt, member of Huntington W.I. as President of the Fair Board. In 1958, Mrs. Bernhardt, and Mrs. W. Jamieson, also a WI member, were appointed directors of the Fair. In 1961, Mrs. Bernhardt became 2nd Vice President, in 1963, 1st Vice President. During this latter term, she acted for the president during his illness, and became President in Jan. 1965. This year's fair has come and gone, and has been pronounced an unqualified success, surpassing all other years, with much credit going to the able president.

Mrs. Bernhardt has been an active member of the WI holding many offices, County offices, and Provincial Convener of Home Economics. She was given a Life Membership by the County for her outstanding leadership as County President. Mrs. Bernhardt plans to move to Ontario this fall, and although her active participation in the WI and in the community will be missed, all wish her happiness in her new home.

LETTER FROM DUBLIN

Dear Fellow-members :

Before hearing of the Associated Countrywomen of the World, I thought you might like to hear a little about the city of Dublin, the venue of the Conference, September 14 to 24.

Dublin, Ireland's capital, is a city steeped in history, tragic and glorious, with haunting memories of great patriots, statesmen, scientist and scholars. It is a city of spacious streets, fine buildings and friendly people; a city which combines the beauty of more leisured centuries with modern progressiveness. Few capitals are so beautifully situated. Dublin Bay forms a sweeping crescent from the Hills of Houth to Dalkey; a salt wind blows into the heart of the city, and the slopes of the Wicklow Hills seem to rise at the end of every street in the southern suburbs.

The earliest accounts of Dublin go back as far as A. D. 140 when Ptolemy called it Eblana. At this time it was no more than an important ford on

the road south from the ancient capital, Tara.

In the eighth century, after fifty years of sporadic plundering, the Danes picked this place as a convenient naval base for their raids. They built a settlement of wooden houses and its importance grew as its trade with the Viking empire increased. Their power was not fully broken until 1014. The Anglo-Normans invaded the country in 1169 and made Dublin the centre of their conquest. In 1172 Henry II held court here and granted the city as a colony to the citizens of Bristol. Dublin saw the coming of the Elizabethan adventurers, sided with the Royalists against Cromwell and with James II against William of Orange.

With the eighteenth century came Dublin's most colorful period of history. During an ultimately successful struggle for Irish parliamentary independence, the spacious Georgian streets, squares and fine public buildings, that are so much a feature of present-day Dublin, sprang into being. The period of independent legislation ended with the Act of Union in 1800.

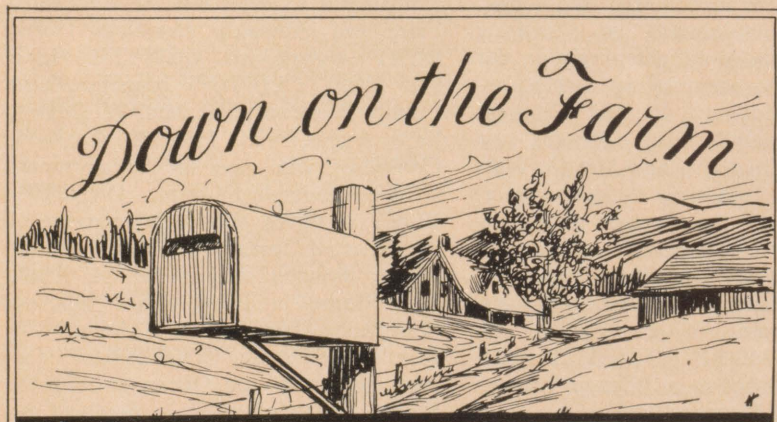
At the close of the nineteenth century, Dublin became the centre of two great cultural movements — the Gaelic

League with the object of restoring the Irish language, and the Irish Literary Renaissance, which ushered in the twentieth century with the early writings of Yeats and the foundation of the Abbey Theatre. The Gaelic League was mainly the inspiration of the 1916 rising. The Declaration of Independence, adopted in Dublin in 1919, was followed by the Anglo-Irish war which ended with the treaty of 1921, after which Dublin was again a storm centre in the tragic Civil War.

With the birth of the Irish Free State, Dublin became once more an independent capital. Its shattered buildings were restored and today Dublin is regarded as one of Europe's most beautiful capitals.

What we delegates who have arrived find is that a journey of only a few miles brings one to a pleasant strand or into the trackless hills; or just a few minutes by cab from our hotel door we are in the heart of the shopping district. I wish you could all be here. I only hope I shall be able to report adequately the highlights of the Conference which lies ahead.

Sincerely,
Ethel M. McGibbon,
Dublin.



by Norma E. Holmes

Dear Min:

The folks are just getting the cards I sent 3 weeks ago from London (!!!!!), so I suppose you didn't get yours. The next time I go touring, I shall mail them before I leave.

I can now bring into every conversation — offhandedly, of course — 'Now, on the continent...! In other

words, I have TRAVELLED. Do you remember me mentioning my Great-Aunt Hattie? Well, she taught kindergarten for 53 years, which should be a record in any country. She was used to children saying, "When my Daddy went to school to you...". But when one day a boy said, "When my
continued on page 19)

The Month With The W. I.

CORRECTION PLEASE! — or rather an omission. Mrs. Watson Patterson was also a charter member of the Wakeham WI and was present at the branch celebration of its 20th Anniversary as written in the July Journal. **ARGENTEUIL:** ARUNDEL had as their guest speaker, Mr. Jean Major from Expo '67 Corporation, who spoke on Expo '67 showing slides to illustrate the progress of this project; Roll Call — why I would like to attend Expo '67; branch is on Expo's mailing list, receiving monthly pamphlets on progress of same. **BROWNSBURG** entertained MORIN HEIGHTS at meeting at which film was shown entitled "The Test"; roll call was to tell an amusing event from school days: Annual Handicraft Tea held, with a cake decorating demonstration and a Hat Bar as added features. **FRONTIER** entertained another branch by putting on the play "It's Your Move". **JERUSALEM-BETHANY** held successful card party; donated prize money to Lachute High School; Life Memberships were given to Mrs L. Boa and to Mrs S. Wilson. **LAKEFIELD** answered roll call by naming favourite school subject. **PIONEER** entertained Jerusalem-Bethany, at meeting whose theme was Education; Mrs C. Hall spoke briefly; highlight of the meeting was coloured slides shown by Mrs M. Douglas of Cushing, on Karachi, Pakistan. **UPPER LACHUTE EAST END** held meeting at Manitou Lodge, guests of LACHUTE branch; Mrs M. Cook, well-known columnist of Lachute Watchman spoke enlighteningly on the history of the surrounding district; catered a wedding; donated Progress Prize to Lachute High School; two members, Mrs Keith and Mrs G. Warwick visited the Cercle de Fermieres at St. Hermas, on the occasion of the latter's 50th Anniversary celebration where they saw beautiful displays of handicraft and floral arrangements, baking, canning of jams, jellies and vegetables. **MORIN HEIGHTS:** interesting film shown on "Cancer"; sponsored Blood Donors Clinic.

CHATEAUGUAY - HUNTINGDON: AUBREY-RIVERFIELD heard Mrs. E. Keddy give an informative talk on the Leadership Course she attended. Mrs. R. Curry, also of Hemmingford spoke of recent picnic to Coolbreeze Estates where ceramics were being made, and ceramics, woodwork and weaving were on display; entertained HOWICK Branch at a picnic; Mr. N. Furcall, nurseryman delivered a most informative talk on the planting and

care of hedges, trees, etc., members taking advantage of a question period; he donated a beautiful Mugho Pine, won by Mrs. Wolodarsky; a Scottish visitor, Mrs. MacGregor of the Kirloughleigh WI, which has a membership of 86, was present. **DEWITTVILLE** saw a film on Supermarkets; heard report of Provincial Convention by Mrs Bulow, and of Leadership Convention by Mrs. G. Moore. **DUNDEE** entertained County President, Mrs. H. Robertson, who gave highlights and important business details on Provincial Convention. **HEMMINGFORD** answered roll call with name of a country and the colour of its flag; saw slides of California, New Orleans, the Rockies and points of interest in Ontario; special collection for Pennies for Friendship. **HUNTINGDON:** Miss Frances Turner gave splendid talk on her trip to Arizona and California and showed many interesting slides; Mrs. C. Reid read information received from a W I member in New Zealand. **ORMSTOWN** entertained County President, Mrs. H. Robertson; held successful food sale. **HOWICK** heard book review on "The Scapegoat", contest on Potted Geraniums; members shelled peas which they donated to Barrie Hospital and to Preston Home.

COMPTON: BROOKBURY received a donation of \$20 from the Bury Athletic Association as first prize for their float in Canada Day Parade; brought donations for kitchen of their hall; contributed to tea-room at Cookshire Fair, and Adelaide Hoodless Home. **BURY** entertained SAWYERVILLE and EAST CLIFTON branches, also County President, and Mrs. W. Coates, East Angus, and Mrs. B. Learned, Cookshire, who gave interesting report on the Leadership Course. **CANTERBURY** observed silence in memory of a departed member, Mrs. Arthur Smith; donated articles for St. Paul's Rest Home in Bury; heard talk on "Education for Gifted Children" by Mrs. G. McAuley. **COOKSHIRE:** pictures shown of the Queen and Prince Philip entertaining W I members on Golden Jubilee of British W I's; contributed to Cancer Society in memory of two departed members, Mrs. J. A. Frasier and Mrs. T. O. Farnsworth; entertained teaching staff of the local high school, and two clergymen of the United and the Anglican Churches.

GATINEAU: AYLWER EAST held grandmother's meeting, as a dinner, with all dishes made from recipes in their new cook book; Mrs. B. MacLean and Miss H. Graham put on an

amusing one-act play, written by themselves. **EARDLEY** named a vegetable and its calorie count as roll call; held contest on scrambled vegetables and fruit; reading by Mrs. R. Bronson on "I'm Fine"; branch placed 4th in W I competition at Ottawa Exhibition, with 16 W I's competing. **RUPERT** chartered a bus and 53 women and children had an enjoyable trip to the Granby Zoo; for roll call recited a poem learned at school; appointed delegates for Fall convention. **WAKEFIELD** held their Annual Garden Party in aid of Gatineau Memorial Hospital, with proceeds amounting to over \$900; entertained Mrs. R. Leach, County President, speaking on Convention and the County President's meeting; Mr. Paul Beaupre, Field Secretary for C.N.I.B., donated gifts for the 1964 canvassers for C. N. I. B.; delicious pot luck supper held at the home of Mrs. F. Welock — it was agreed that W I members are good cooks! **WRIGHT:** Mrs. Roy Leach, County president, spoke on general W I business, and answered questions; prizes were won at Ottawa Exhibition; Mrs F. Payne purchased and donated a new Canadian Flag to the branch; members from Pickanock and Aylwin helped serve at Wakefield Hospital Garden Party. **MOST BRANCHES** in the County exhibited at the Aylmer Fair.

MISSISQUOI: COWANSVILLE answered roll call by telling the life of an early settler in the vicinity; paid in talent money and told how they earned it; talk by the Education Convener on Regional Schools and New Concepts in Education. **DUNHAM** heard a former member, now of Alberta, tell of a trip to the Grand Canyon; held silent auction to raise Pennies for Friendship; **FORDYCE:** a member who had recently taken a course at Macdonald College on teaching the "slow-learning" pupil, gave a demonstration of the handwork that such pupils can do, with about 100 examples of articles made by them. **STANBRIDGE EAST** held contest on subjects enjoyed in school; filled Christmas stockings for their adopted twins in Greece.

MONTCALM: RAWDON held Annual Tea and sale of homecooking, nearly-new articles and handwork, with excellent financial results; some of the proceeds help finance the WI sponsored Dental Clinic for school children; Dr. Smyley Scholarship of \$100 awarded to Evelyn Tinkler; slides of Western

Canada (Banff and Vancouver) shown by member, Miss A. Cassidy.

PAPINEAU: LOCHABER contributed to Coupon #367; received donations of flannelette and wool and are making nightgowns, mitts, socks and beanies for Unitarian Service; named first teacher as roll call.

PONTIAC: CLARENDON enjoyed coloured slides, taken by a member who had toured Western Canada; members and friends "went out" to dinner at Valley Motel, Renfrew, and later enjoyed a conducted tour of Chenaux Hydro Plant, Portage du Fort; donated food to local hospital auxiliary. **QUYON** had questionnaire on clothing; readings on Care in Labelling Fabrics, WI in other countries, and Old-Fashioned Remedies; held food sale. **WY-MAN** members and friends were taken on a conducted tour of the Atomic Plant at Chalk River, Ont., and were later served dinner at the Plant; held drawing contest.

QUEBEC: VALCARTIER held Annual Labour Day Picnic and Barbecue, followed by a Dance — all most successful and financially very rewarding.

RICHMOND: CLEVELAND held their meeting at the Wales Home, and entertained former members who now reside in this Home, with a social afternoon of Bingo and refreshments.

DENISON'S MILLS heard very interesting and enjoyable talk on the history of old schools in Sipton, by Mrs. V. Snaden; held Window Box contest, with first prize going to Mrs. A. Boreham, 2nd to Mrs. D. Reif, and 3rd to Mrs. A. Pariseau; school prize money given to St Francis High School, Richmond, and A. D. S. School in Danville. **MELBOURNE RIDGE** voted \$50 to Student Loan Fund at St. Francis High School; held school fair for WI members and their children with 16 children entering 107 exhibits and 13 members exhibiting; operated a lunch booth at Richmond Fair and splendid financial proceeds were realized. **RICHMOND HILL** held Chicken Pie Supper; gave prizes to Grades 3 for improvement in Spelling; **RICHMOND YOUNG WOMEN** purchased Coupon #367 for extension work in Canada's North; held a contest on tuberous begonias, with the branch supplying the bulbs in spring, and prize for best won in the fall by Mrs. E. Stimson; held jumbled word contest of towns and cities in Eastern Townships, won by a guest, Mrs. A. Smith. **SHIPTON** held a name-the-state contest, won by Miss J. Gallup; donated \$50.00 to Sherbrooke School for Retarded Children; held food and handicraft sale. **SPOONER POND**: Each member made a corsage for her left-hand neigh-

bour with a prize going to Mrs. G. Blanchard; sales table of articles suitable for Christmas gifts, articles were auctioned; Pennies for Friendship collected at every meeting; congratulations tendered to Mrs. A. Coddington whose cross-stitch tea cloth won first place in branch contest, and later won first prize in County contest, and another prize at Richmond Fair. **GORE** donated prize money to Plowman's Association; sent plant to sick member; roll call was name a weed and how to get rid of it.

ROUVILLE: ABBOTSFORD: Mrs. B. Rowell showed slides of wedding of Miss Sandra Coates, and a selection of scenic views of Province of Quebec; multiple choice quiz held on what do you know about salt.

SHEFFORD: GRANDBY HILL's roll call was a display of old cook books, some of which dated well back in the 1800's; box sent to forgotten patient at Verdun Hospital. **GRANBY WEST** brought articles for a silent auction; held contest on Canadian Geography; are making bandages for Cancer Society and hospital gowns from white shirts; 3rd prize won by branch for afghan entry in Salada Contest. **WATERLOO - WARDEN** gave prizes for 7 different classes in the High School Fair; article read on "Thread"; named a high school teacher as roll call.

SHERBROOKE: BROMPTON ROAD entertained **SHIPTON** branch; contest on things to do, picked from a hat. **LENNOXVILLE** heard articles on the Use of Cleaning Fluids and their Dangers, the Making of Pine Cone Sachets, and "Women and Roses"; money voted for School Fair Prizes; handmade articles brought in for handicraft booth at Sherbrooke Fair. **MILBY** entertained members from North Hatley Branch; Mrs. A. Coates spoke on Quebec Mosaic; Contest held on Nations Quiz, and Let's Tour Sherbrooke; donated money to school fair prizes.

TWO MOUNTAINS: OKA enjoyed reading "Salute to Women's Institutes", an anniversary special in "Woman's Own", an English magazine, and the Queen's Garden Party for the English W.I.

DOWN ON THE FARM

(continued)

Grandpa went to school to you..." she decided it was time to quit. So they gave her a gold watch and a lot of speeches and she retired. She died last year at 92.

She always had a soft spot for me because I 'went in for teaching', so in her will she left me a bequest with the provision that I should use it on travel — to broaden my mind instead of me. The family connived, Mother Lowman came to take charge of the children and away I went.

I took the 10.25 p.m. plane from Montreal. I wondered just when they stopped thinking in Canadian time and started in English for the difference in the 5 hours. Halfway across? But no, as it was BOAC we took off in English. Dinner was served at midnight (my time). I wondered if they would serve breakfast at 4 a.m. my time. They did better. The orange juice arrived at 3. Of course when we arrived in London (the clouds over Ireland were, naturally, green) people had been at work for nearly an hour and it was almost 10 o'clock on a lovely morning.

The first thing I noticed on the way from airport to the city were the chimney pots. Rows of block-long flats (what we would call 'company housing', I expect) in red brick, each with its row of chimney pots. It looked like some sort of a game where you could move them around on a board. And then in London and there was Piccadilly and Trafalgar Square with Nelson's Column, and all of a sudden Buckingham Palace and coming towards us a troop of Palace Guards all scarlet and plumes. Passing names one after the other you have read about so long leaves you in a sort of gasping state.

My hotel was small and the dining room was panelled in very dark oak with helmets and swords hanging on the walls for decoration. The dining room was full of natives and the conversation was so muted, if you passed the door, you would conclude the room was empty. As our guide said at Stoke Poges church, quoting Grey's Elegy, "And all the air a solemn stillness holds". But the next daily a busload of Spanish arrived!!!! The little Scottish chambermaid said, "we get them from all countries, but one lot, why they even took the SOAP!" I was glad I hadn't brought the little cake I had brought home from a motel, thinking I had paid for it so it was mine.

ELOISE

P.S. Just consulted the Encyclopedia Britannica and it says, Vol. 8 that Eton is being modernized. It also says, Vol. 8, that 'it became customary to wear this dress in the middle of Queen Victoria's reign'. I like the guide's version better.

Immigration To Canada

THE STORY of immigration is, in effect, the history of Canada.

Initially, one thinks of Sir Humphrey Gilbert and Newfoundland... Samuel de Champlain and Acadia... the United Empire Loyalists... and thousands of others whose names do not appear in history books but who have, in their own way, contributed greatly to the early development of Canada.

The first Canadian Immigration Act came into force in 1869. It limited the number of passengers a ship could carry. Other than that restriction, however, the main requirement for immigrants for the next fifty years was little more than the ability to walk off the ship.

Travelling conditions were hazardous. In 1547, for example, of 109,690 immigrants who sailed from Europe, more than 16 per cent died en route. Those who survived were left to fend for themselves after arrival. Many engaged in farming, an occupation in which they had had no previous experience.

While immigration is one of the oldest historical functions of government, Canadian Citizenship is one of the most recent. Thus the present Department of Citizenship and Immigration is a combination of the old and new.

THE DEPARTMENT'S WORK

The Department of Citizenship and Immigration is composed of four branches: Immigration, Citizenship, Citizenship Registration and Indian Affairs.

The Immigration Branch is responsible for administering the Immigration Act and Regulations. This involves selection, admission, settlement and examination of all persons coming to



by **EDYTH R. WESTOVER**



In 1914, the peak year for immigration, 400,870 new Canadians arrived to make their home here. In 1963, last year figures are available for, the number was 93,151.

Canada as well as the deportation of undesirable persons.

The Citizenship Branch attempts to promote greater understanding of Canadian Citizenship and maintains liaison with ethnic groups, while the Citizenship Registration Branch is responsible for the issuance of Canadian Citizenship Certificates.

The Indian Affairs Branch administers the affairs of Canada's Indian population in accordance with the Indian Act and Regulations.

Since the end of World War II, more than two million immigrants from all over the world have been admitted to Canada. The Province of Ontario has received slightly more than half of the total number of post-war immigrants. The main sources of immigrants to Canada in recent years have been the United Kingdom, Italy, West Germany and the Netherlands.

Today, some 350 years after the settlement of the first European adventurers in Canada, approximately one-sixth of the population is foreign-born. The 1961 census showed that Canada had a slightly larger proportion of foreign-born residents than in 1951, a

reflection of the magnitude of immigration during the decade.

Territorially, Canada is one of the largest nations in the world. While estimates of the population capacity of Canada vary, a modest estimate is considered to be 40-50 million people. The question therefore is, not whether the population of Canada should increase, but at what pace it should advance. Although Canada's birth rate of 26 per thousand of population is one of the highest among advanced countries of the world, many people feel that the normal process of population growth is too slow for the development of the country.

SOMETIMES CRITICIZED

During prosperous times there is little criticism of immigration policy. But, when the economy lags there is, in some quarters, a tendency to question the value of immigration. Such critics claim that immigrants take jobs from native-born Canadians. However, economists see little or no connection between immigration and unemployment. The fact that immigrants are producers of wealth, being employers of labour

and consumers of Canadian products, receives little publicity, yet no one can deny that the influx of more than two million immigrants since World War II has had a significant effect on the Canadian economy.

Among the principal economic advantages of immigration are the following:-

- (1) Immigration has spread the overhead costs of federal and local governments.
- (2) It has increased the market for domestic products.
- (3) It has contributed to Canada's industrial growth.
- (4) It has introduced new knowledge and skills.

The majority of immigrants come to Canada during their most productive years. Their education and skills have been acquired in their native lands and they become immediate assets. Immigrant engineers, and other professional and technical workers, have played a prominent part in Canada's development. Many others have established themselves in agriculture, offsetting the exodus of young farm people to the cities. In addition, a considerable number of immigrant businessmen have brought in vast sums of capital, while others, mainly through their efforts in Canada, have established new businesses. Newcomers have also contributed to the enrichment of the Canadian culture and traditions.

There are two extreme views concerning immigration policy. One calls for the unlimited admission to Canada of immigrants, while, the other would virtually bar the door to immigrants. It is obvious that neither of these extreme views is valid.

Those who suggest flooding the country with millions of immigrants, usually from countries where emigration is encouraged because of an underdeveloped economy, point to the tremendous contribution made by unskilled immigrants in the early days of Canada's growth. Canada now, however, is a far different and more complex nation than it was a hundred years ago. The demand today is not for persons with strong backs to clear the forests and to build railways but rather for those who possess the skills required by a growing industrialized economy.

People migrate to Canada motivated by factors sometimes described as "push and pull" — "push" being political, religious, or economic conditions in the land of origin, and "pull", the opportunities available in Canada. Prior to 1850, "push" was the predominant factor. The "pull" impetus, reflective of the opportunities and rewarding

way of life Canada has to offer, is now the dominant force. There is, too, the "push" exerted by such national and international factors as the Hungarian Revolution and the Suez crisis.

Canada's contribution to the solution of the post-war refugee problem is one in which Canadians may take justifiable pride. It is second only to that of the United States. The 37,000 Hungarian refugees admitted since 1957 constitute the greatest influx experienced by any country on a per capita basis. The manner in which these refugees have integrated into Canadian life is a proud and courageous story.

As one of its contributions to World Refugee Year, Canada admitted 6,912 persons, including 325 tubercular refugees and 501 members of their families. The majority have rapidly adjusted to the Canadian way of life.

PRESENT REGULATIONS

The present immigration regulations permit refugees to apply for admission to Canada as ordinary immigrants, subject only to the usual selection standards. Also, they receive special leniency with regard to educational and occupational requirements.

It is interesting to note that 275,000 refugees from Europe, roughly one-quarter of all European refugees, have settled in Canada in post-war years.

In May, 1962, the Canadian Government decided to accept one hundred Chinese refugee families from Hong Kong. This was a special movement because of the emergency in Hong Kong. In the past 14 years, under normal immigration conditions, approximately 25,000 Chinese immigrants have come to Canada from that island.

New immigration regulations became effective February 1, 1962. While emphasis now is on education, training and skills, possessed by prospective immigrants, intangible qualities such as resourcefulness, initiative, integrity and flexibility are also taken into consideration.

Canadian immigration officers are established in 20 countries abroad, but applications from immigrants are received from almost every part of the world. In 1961, for example, immigrants from 175 different countries, colonies and territories were admitted to Canada.

In most cases the prospective immigrant discusses opportunities available in his line of work in Canada with a visa officer and may obtain informational material about living and working conditions.

Prospective immigrants in Europe who do not have sufficient funds may apply to the Department for "assisted

passage". This is an interest-free loan to help pay transportation costs.

Canada has no quota system such as that employed by the United States. In the early years of the 20th century, when the Prairies were being opened up for settlement, more than 400,000 immigrants (approximately 5 per cent for our population) entered Canada in one single year. That era of almost uncontrolled immigration ended with the advent of World War I, the depression of the 1930s, and World War II.

Since the 1920s, due to industrial growth and urban development, greater attention has been paid to the need for people with skills and characteristics which would ensure their integration into urban life. Further changes occurred after World War II and policies were adjusted to modern conditions, including humanitarian needs.

Approximately 56 per cent of eligible immigrants have become Canadian citizens. The average immigrant resides here approximately 6½ years before applying for Canadian Citizenship. At first glance, 56 per cent may not seem a high percentage, but the published ratio in the United States and Australia, the other two main immigrant-receiving countries, is considerably lower.

One of the main difficulties confronting many newcomers is the problem of language. However, the immigrant of today has a great advantage over his predecessors in this respect, since language classes in English and French, or both, are available to new arrivals in almost every urban centre in the country. In addition to those receiving instruction through church groups, voluntary agencies or by private tuition, approximately 35,000 persons annually enroll in regular language and citizenship classes in Canada.

The services of the Immigration Branch, both in Canada and overseas, are directed to meet the needs and requirements of immigrants. The Branch's settlement officers provide a counselling service for individual immigrants and help them to become established in industries and small businesses.

During the period 1950 to 1962 inclusive, the Immigration Branch had direct case history reports of 9,849 newcomers who established in businesses of their own, creating employment for 44,749 people. They paid more than 116 million dollars for these enterprises, with down payments of over 72 million dollars. In the same period, it is known that at least 7,000 bought farms at a total cost of more than 97 million dollars.



The College Page . . .

EXPEDITION HOME AGAIN

According to Joe Lovrity, Faculty of Education, and Wyb. Hoek, Department of Entomology, it isn't all fiestas, bull fights and flowers in Mexico. In some areas, they found the poverty very depressing. "From ten to twelve people live in a one-roomed house," they report, "Cattle, burros and pigs, many of them literally starving to death wander loose looking for food. Night driving was impossible; the chances of hitting one were too great."

But there was beauty too. "At one time we seemed to be in a cloud of butterflies. While chasing one, another even larger and more beautiful would cross our path. . . It was at these heights (12,000 feet) that we caught the large morpho butterfly with a wing span of six inches. Its colour is the most iridescent metallic blue that one can imagine, and when the sun catches the wings, it is a fantastically beautiful sight."

The Lyman Museum's first full-fledged expedition was most successful. Valuable material was collected for genetic studies and the Museum has countless specimens to add to its already renowned collection.

DR. STEPLER EXPO CHAIRMAN

Dr. Howard Stepler, past president of the Agricultural Institute of Canada and chairman of the Department of Agronomy at Macdonald College, recently succeeded Dr. Rolland Poirier as chairman of Expo's Advisory Committee on Agriculture.

This committee, composed of top agriculturists from across Canada guides the multi-million dollar exhibit for Expo '67 to illustrate the theme to the world.

Dr. Poirier was recently appointed to the Quebec Royal Commission on Agriculture.

COLLEGE BARNS REMODELLED

For the first time since their construction half a century ago, the College farm buildings are undergoing major renovation. Inside the familiar stone walls, new research facilities, new teaching laboratories, and new public observation accommodation are being installed to bring the structures into line with the needs of a dynamic agriculture. We hope to have a photo story for a future issue.

ANGUS SALE AT COLLEGE

Sponsored by the Quebec Aberdeen Angus Association, purebred Angus Aberdeen cattle from many of the top show herds of Eastern Canada went over the auction block at Quebec's first "Grand Prix" sale held in the livestock pavilion at Macdonald College on September 18th. The sale totalled \$36,000 for the 62-head, an overall average of \$580. A 2-year old cow consigned by Summerfair Ranch, Montebello, Quebec, topped the sale at \$2,000. Bob Laberge paid \$1500 for a yearling heifer consigned by Brome Angus Farm.

More than two thirds of the cattle were purchased for Quebec herds. The rest went to Texas, Ontario and Maritime buyers.

YOUR NEWS PLEASE, ALUMNI

We know Mac graduates are in all corners of the world, shaping the course of events at home and abroad. But they are much too quiet and modest about it.

If you have been promoted, honoured, or given an interesting assignment, please let us know. Your friends want to see it on this page. And telling tales on the other fellow is quite in order in this case.

YEAR '69 REGISTERED

With the start of this fall's term, the total student enrolment has passed the 1700 mark. Third-year Agriculture was augmented with thirteen students from the Deventer School of Agriculture in the Netherlands, and by thirty-three from the Nova Scotia Agricultural College. In the Faculty of Education, 18 new staff members have been appointed to teach the growing courses.

Here is the breakdown:

| | |
|---------------------------------|------|
| B.Sc. Agriculture | 342 |
| B.Sc. Home Economics | 173 |
| Faculty of Education | 1026 |
| Diploma Agriculture (Approx.) | 65 |
| Post-Graduate Studies (Approx.) | 100 |

MINISTER VISITS ARBORETUM

The Hon. Lucien Cliche, Quebec's Minister of Lands and Forests, officiated at a tree planting ceremony in the Morgan Arboretum in September. The Minister, in his address, spoke of his Department's plans, in co-operation with the Department of Agriculture and Colonization, to utilize for forest production lands which are marginal for agricultural production.

CHRISTMAS TREE GROWERS INVITED TO FALL FIELD DAY

Christmas Tree production—growing, culturing, shearing pruning, marketing — will be featured at the Fall Field Day, Morgan Arboretum on Saturday, November 20th. Packaging boughs for Christmas decorations as told in J. D. MacArthur's article on page 9 will be one of the many profitable ideas demonstrated.

The program starts at 9:30 a.m. and ends at noon. Everyone interested is invited.